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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,420	11/13/2000	Michael J. Daneman	ONX-109	9691

7590 09/11/2003
Joshua D. Isenberg
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Fremont, CA 94539

EXAMINER
CULBERT, ROBERTS P

ART UNIT	PAPER NUMBER
1763	

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/712,420

Applicant(s)

DANEMAN ET AL.

Examiner

Roberts Culbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 and 25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16, and 24 is/are allowed.
- 6) ☒ Claim(s) 1-15 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1002 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 8/12/03 have been fully considered as follows.

1. Information Disclosure Statement

A signed copy of the PTO-1449 filed 8/3/01 is included with this office action.

2. Drawing Amendments

The drawing replacement sheet is approved.

3. Specification Objections

The new matter objection to the preliminary amendment filed 11/13/2000 is withdrawn in view of the granted 4/17/2001 petition.

4. Claim Rejections

The rejections under 35 U.S.C. 112, second paragraph are withdrawn in view of applicants remarks filed 8/12/03. Applicant's arguments regarding the rejections under 35 U.S.C. 102 and 103 have been considered, but are moot in view of the new grounds of rejection that follow.

Claim Objections

Claim 25 should be marked (withdrawn) on the listing of claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 14 recites the limitation "etch-stop layer". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,747,353 to Bashir.

Referring to the figures, Bashir teaches a method for a controlled release of structures comprising: forming one or more trenches (121) in a layer of device material (figure 2); filling one or more selected trenches with an etch-stop material (polysilicon) to form one or more etch-stop trenches (figure 3); defining one or more structures (142) between the selected trenches; and etching one or more portions of the device layer between the etch-stop trenches to release the structures, wherein the etching does not etch the etch-stop material (figure 8).

Regarding claim 2, Bashir also shows depositing a layer of etch-stop material (136 and 140) over the surface of the device layer (figure 5).

Regarding claim 3, Bashir teaches forming one or more openings in the etch-stop material (figure 6).

Regarding claim 4, the etching undercuts one or more portions of the etch-stop material (figure 6).

Regarding claim 5, the layer of device material is disposed between two layers of etch stop material.

Regarding claim 6, the device layer includes one or more layers of a silicon-on-insulator (SOI) substrate.

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Regarding claim 7, the device layer is a layer of silicon glass or oxide.

Regarding claims 8 and 9, the etching one or more portions of the device layer may include a wet etch process (Col. 6, Lines 55-57), and/or a dry etch process (Col. 6, Lines 20-23, 30-35, and 45-50).

Regarding claim 10, Bashir teaches forming a structural layer (142) proximate one or more exposed areas of the device layer (figure 6).

Regarding claim 11, the etch process does not etch the structural layer (figure 8).

Regarding claims 12 and 13, Bashir teaches that the etch process releases one or more portions of the structural layer (figure 8).

Regarding claim 23, the structural layer (142) is protected by one or more etch-stop layers (figure 6).

Allowable Subject Matter

Claims 16 and 24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to show or render obvious a process for forming structures comprising: forming one or more trenches in a layer of device material; filling one or more selected trenches with an etch-stop material to form one or more etch-stop trenches; masking a surface the layer of device material to expose one or more selected areas of device material that border one or more of the etch-stop trenches; and forming one or more structures on one or more of the selected areas of the device material that were exposed; and etching one or more of the selected areas of the device layer to release the structures, wherein the etching does not etch the etch-stop material.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 6,121,552; and 6,291,875.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberts Culbert whose telephone number is (703) 305-7965. The examiner can normally be reached on Monday-Friday (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

R. Culbert



GREGORY MILLS
SUPERVISORY PATENT EXAMINER
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